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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,107	06/27/2001	Shinji Kawamoto	10873.760US01	4882

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EXAMINER	
PIZIALI, ANDREW T	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/893,107	KAWAMOTO ET AL.	
	Examiner	Art Unit	
	Andrew T Piziali	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 28-31* is/are pending in the application.

4a) Of the above claim(s) *28-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Appeal Brief

1. In view of the Appeal Brief filed 3/29/2004, PROSECUTION IS HEREBY REOPENED. In order to place the application in better form for appeal, the examiner has withdrawn the rejections, and the finality, of the Office Action mailed 8/1/2003, in view of the new grounds of rejection set forth below.

2. To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111; or,

(2) request reinstatement of the appeal.

3. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-6 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,786,784 to Nikodem et al. (hereinafter referred to as Nikodem) in view of USPN 6,670,581 to Degand et al. (hereinafter referred to as Degand) in view of USPN 3,982,092 to Marriott.

Regarding claims 1-6 and 31, Nikodem discloses a window glass for a vehicle

comprising a glass sheet and a transparent conductive film and a pair of bus bars for feeding power to the transparent conductive film, the bus bars including a longer bus bar and a shorter bus bar, the transparent conductive film and the bus bars being formed on the glass sheet (see entire document including the abstract, column 5, line 32 through column 6, line 29 and Figure 1).

Degand discloses that it is known in the art that the temperatures at different portions of a heated window vary from one location to another based on the nature of the conductive film and the electrical voltage difference between the two bus bars (see entire document including column 2, lines 13-23). Marriott discloses that it is known in the art to vary the thickness of the conductive film in select areas of a vehicle window to vary the relative temperatures at different portions of the window (column 6, lines 7-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the thickness of the conductive film of Nikodem, as taught by Marriott, such that the heat generated by the conductive film is more uniform than heat generated by a conductive film with a uniform surface resistance, and such that the heat generated by the conductive film is less than 1500 W/m^2, because it is understood by one of ordinary skill in the art that the conductive layer thicknesses in select areas of the film determine the temperature of the select areas of the film, as well as the total heat generated by the conductive film, and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claim 4, Nikodem discloses that the window glass may comprise at least two glass sheets and a thermoplastic resin film for bonding the glass sheets and the conductive film

and bus bars are provided on the surface of one of the glass sheets (abstract and column 7, lines 28-44).

Regarding claim 5, both Nikodem (column 6, lines 18-29) and Degand (paragraph bridging columns 2 and 3) disclose that the conductive film may comprise a metal oxide film, a silver layer and a second metal oxide layer. Nikodem does not specifically mention a five layer conductive film, but Degand discloses that it is known in the art that alternating layers of metal oxide and Ag may be repeated as desired to reach the desired selectivity (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a five layer conductive film, as taught by Degand, rather than the three layer conductive film disclosed by Nikodem, because a five layer film increases the selectivity of the glazing more than a comparable three layer film which is desirable in some vehicular window glass applications.

Regarding claim 6, Nikodem discloses that a ceramic mask may be provided at a portion where the bus bars are formed (abstract and column 5, lines 32-60).

6. Claims 1-6 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,786,784 to Nikodem in view of USPN 6,670,581 to Degand in view of USPN 5,390,595 to Cutcher.

Regarding claims 1-6 and 31, Nikodem discloses a window glass for a vehicle comprising a glass sheet and a transparent conductive film and a pair of bus bars for feeding power to the transparent conductive film, the bus bars including a longer bus bar and a shorter bus bar, the transparent conductive film and the bus bars being formed on the glass sheet (see

entire document including the abstract, column 5, line 32 through column 6, line 29 and Figure 1).

Degand discloses that it is known in the art that the temperatures at different portions of a heated window vary from one location to another based on the nature of the conductive film and the electrical voltage difference between the two bus bars (see entire document including column 2, lines 13-23). Cutcher discloses that it is known in the art to vary the thickness of the conductive film in select areas of a vehicle window to vary the relative temperatures at different portions of the window (column 1, lines 40-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the thickness of the conductive film of Nikodem, as taught by Cutcher, such that the heat generated by the conductive film is more uniform than heat generated by a conductive film with a uniform surface resistance, and such that the heat generated by the conductive film is less than 1500 W/m^2, because it is understood by one of ordinary skill in the art that the conductive layer thicknesses in select areas of the film determine the temperature of the select areas of the film, as well as the total heat generated by the conductive film, and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claim 4, Nikodem discloses that the window glass may comprise at least two glass sheets and a thermoplastic resin film for bonding the glass sheets and the conductive film and bus bars are provided on the surface of one of the glass sheets (abstract and column 7, lines 28-44).

Regarding claim 5, both Nikodem (column 6, lines 18-29) and Degand (paragraph

bridging columns 2 and 3) disclose that the conductive film may comprise a metal oxide film, a silver layer and a second metal oxide layer. Nikodem does not specifically mention a five layer conductive film, but Degand discloses that it is known in the art that alternating layers of metal oxide and Ag may be repeated as desired to reach the desired selectivity (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a five layer conductive film, as taught by Degand, rather than the three layer conductive film disclosed by Nikodem, because a five layer film increases the selectivity of the glazing more than a comparable three layer film which is desirable in some vehicular window glass applications.

Regarding claim 6, Nikodem discloses that a ceramic mask may be provided at a portion where the bus bars are formed (abstract and column 5, lines 32-60).

Response to Arguments

7. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

atp

GTP 5/6/04

ANDREW T. PIZIALI
PATENT EXAMINER

Ula Ruddock

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Primary Examiner
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